Remarks

Claim 1 is pending in this case.

The rejection of Claim 1 under 35 USC 103 over Barlow in view of Owen is respectfully traversed. Claim 1 defines the claimed method as being a "method of adjusting the performance of a *model-free adaptive controller having a delay predictor* (emphasis supplied)". The Office Action implies that the Examiner considers a model-free adaptive controller to be any controller that does not have a model. However, a model-free adaptive controller, commonly referred to as an MFA controller, is a specific type of controller originally disclosed in U.S. patent No. 6,055,524 to G. S. Cheng. Various aspects and enhancements of that type of controller are disclosed in a series of subsequent patents and applications by the same inventor.

An MFA controller and a PID controller such as Barlow's involve entirely different control technologies, and the methodologies of one cannot meaningfully be used in the other. Specifically, the Examiner cites col. 2, ll. 20-29 of Barlow as being anticipatory of clause a) of Claim 1. Not only does the cited passage contain no mention of any range of the performance index, but applicant's "performance index" is different from Barlow's "performance index". Barlow does not *establish* a *selectable* performance index in the sense of clause a). Barlow's "performance index" is simply a selectable function of the error input. By contrast, applicant's performance index is a user-selected quantity between 0.01 and 100 and is not a function of the error.

Likewise, the Examiner cites col. 3, ll. 42-55 against clause b) of Claim 1. The cited passage deals with the generation of variable-width pulses under the control of level shifter 50. That has nothing to do with applicant's claimed setting of the controller gain as being equal to the *selected* performance index divided by the *estimated* (i.e. pre-selected) process static gain (see specification, p. 10).

Thirdly, the rejection of clause c) of Claim 1 over Owen as a secondary reference must fail on several grounds. For one, Owen and Barlow are completely different methodologies and are not reasonably combinable. Secondly, the cited passage at col. 8, ll. 41-60 of Owen is not a teaching of setting the controller time constant as $T_c = T/I_p$ in applicant's sense.

In view of the above, Applicant respectfully submits that the application is now in condition for allowance, and an early indication of same is requested. The Examiner is invited to contact the undersigned with any questions.

Respectfully submitted,

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